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## ABSTRACT OF THE INVENTION:

The invention generally concerns the use of amino acid denaturants for denaturing or separating double stranded nucleic acid molecules. More specifically, the present invention provides a method for the rapid isolation and recovery of a desired target DNA or RNA molecules from a mixture or library containing such molecules. The method involves the use of haptenylated probes and amino acid denaturants to select the desired molecules and eliminate the undesired library members from a sample. The invention also provides a method in which larger or full-length nucleic acid molecules can be isolated from the subpopulation of desired molecules.